Lifestyle and Cultural Practices of Tribal Populations and Risks from Toxic Substances in the Environment

The U.S. Environmental Protection Agency (EPA)'s Office of Research and Development and the U.S. Department of Health and Human Service's Agency for Toxic Substances and Disease Registry (ATSDR) are seeking applications for research on lifestyle and cultural practices of tribal populations and risks from toxic substances in the environment. Tribal populations may be at especially high risk for environmentally caused diseases and health outcomes because of their subsistence lifestyles, occupations and customs, and/or environmental releases affecting tribal lands. This solicitation invites applications in two areas of current interest, the development of 1) exposure and effects assessment methods that can be broadly applied across geographic regions and tribal populations and 2) risk management strategies and options that will lead to reduction in risk from exposure.

The ATSDR is mandated by Congress to perform specific functions concerning the effect on public health of hazardous substances in the environment. These functions include applied research in support of public health assessments, information development and dissemination, and education and training concerning hazardous substances. Supporting research proposals awarded as a result of this request for applications (RFA) is consistent with a number of the ATSDR's research focus areas for 2002–2010, including ascertaining the relationship between exposure to toxic substances and disease and developing and providing reliable, understandable information for people in affected communities and tribes and for stakeholders. The ATSDR's interest in this grant solicitation is to assist tribes in their understanding of exposures, potential health risks, and ways to reduce exposures and risks that are culturally acceptable.

Proposals in response to this RFA should demonstrate the ability of new or existing methods and models to measure and/or predict the cumulative exposure and effects directly related to subsistence practices. Topics of interest include, but are not limited to, 1) methods and studies to quantify subsistence-based exposures and attendant effects that occur primarily through food, medicinal, cultural/ceremonial, and occupational practices and 2) models that integrate the data collected on the subsistence activities described above to ascertain/predict the cumulative exposure profile, that is, total exposure through diet, medicinal, cultural/ceremonial, occupational, and other practices, and attendant risks.

The EPA and the ATSDR will support research that leads to approaches to reduce subsistence-based risk, especially those that may not compromise lifestyles to a significant extent. Topics of interest include, but are not limited to, the development of 1) approaches to estimate the distribution of subsistence-based risk within or across subsistence groups and geographic regions, including the relative contribution of various practices, for example, diet, medicinal, cultural/ceremonial, and occupational, to the cumulative exposure; 2) methods, which may include educational and/or intervention materials, to reduce risk in subsistence groups; and 3) culturally sensitive strategies, approaches, and plans that will help reduce subsistence-based risk.

The EPA and the ATSDR encourage applications that can address one or more of the above objectives that relate to lifestyle and cultural practices of tribal populations and risks from toxic substances in the environment. Four major benefits are expected from these grants: 1) new partnerships that respect the rights and different cultural practices of each of the participating tribes; 2) exposure and risk models that assist the participating tribes in better understanding their exposures and how to reduce any health threats; 3) improved understanding of the many differences in lifestyle and cultural practices that can influence tribal exposures and health risks, as a result of aggregation of information from the grants; and 4) integrated approaches and principles that may guide efforts subsequently undertaken by other populations.

An estimated $1.5 million, including direct and indirect costs, will be awarded, depending on the availability of funds. The EPA and the ATSDR anticipate funding three or four grants under this RFA. The projected total award per grant is up to $150,000 per year for up to 3 years. Requests totaling amounts above $450,000 will not be considered.

The deadline for receipt of applications is 10 July 2002. Instructions on applying for a STAR grant and the necessary forms are available on the National Center for Environmental Research Web site at http://es.epa.gov/ncer/rfa/forms/downlf.html. Complete information on this announcement is located at http://es.epa.gov/ncer/rfa/02trib_risk.html.

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Superfund Minority Institutions Program: Hazardous Substance Research

The U.S. Environmental Protection Agency EPA, Office of Research and Development (ORD), National Center for Environmental Research (NCER), is seeking applications for the Superfund Minority Institutions Program that will provide extramural funding to minority institutions [historically black colleges and universities, Hispanic-serving institutions, and Native American tribal colleges] via grants to conduct research on Superfund-related topics. Appropriate projects include research on risk assessment and risk management issues associated with contaminated sites as well as related subjects such as community assessment and involvement, susceptible populations, and tribe-specific topics.

Examples of research areas of interest are identified below. However, applicants are not limited to these areas, as long as the proposed research responds to the goals of this request for applications:

1) *Characterization*: a) methods for contaminant sampling to determine location and magnitude, b) sensitive quantitative analysis of selected compounds, and c) effective design of site-specific sampling strategies;

2) *Risk assessment*: a) bioavailability of contaminants to humans and the ecosystem, b) ecologic effects of contaminants, and c) issues of dermal exposure to contaminants;

3) *Remediation*: a) basic processes involved in contaminant interactions with the media in which they are found (soil, vadose zone, groundwater, and sediments) that could be enhanced to promote less costly subsurface media remediation that meets cleanup standards; b) cost-effective subsurface remediation processes for metals and inorganics, contaminated sediments, and dense non-aqueous-phase liquids (DNAPLs); c) environmental impacts of existing and innovative remediation techniques, particularly for contaminated sediments; d) methods for monitoring the long-term performance of remediation processes to detect process failure or lack of effectiveness; and e) rapid and low-cost monitoring, characterization, and treatment options for risk management;

4) *Risk Communication*: a) approaches and special considerations for assessing and communicating risks and selecting cleanup options for waste sites located in Native American lands and in economically disadvantaged or minority communities; b) tools that might enhance participation in the assessment of site risks and selection of cleanup options; c) community involvement processes that would be effective for large geographic sites that encompass multiple diverse communities; and d) ways to measure the effectiveness of community involvement in the remediation decision-making process.

An estimated $2.4 million will be awarded in this program, depending on the availability of funds. Grants may not exceed $200,000 per year, including direct and indirect costs, for up to 2 years (total $400,000). The EPA anticipates funding approximately six grants under this request for applications.

The deadline for receipt of applications is 3 July 2002. Instructions on applying for an NCER STAR grant, and the necessary forms for submitting an application, are available on the NCER Web site at http://es.epa.gov/ncer/rfa/forms/downlf.html. Complete information on this announcement is available at http://es.epa.gov/ncer/rfa/02minhazinst.html.

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Transition to Independent Positions (TIP)

Human health and human disease result from three interactive elements: 1) environmental exposures, 2) individual susceptibility, and 3) time. The mission of the National Institute of Environmental Health Sciences (NIEHS) is to reduce the burden of human illness and dysfunction from environmental exposures by understanding each of these elements and how they interrelate. The NIEHS achieves its mission through multidisciplinary biomedical research programs, prevention and intervention efforts, and communication strategies that encompass training, education, technology transfer, and community outreach.

An important element of the NIEHS mission is to develop the next generation of exceptionally talented young scientists who are committed to understanding the impact of environmental exposures on human health. The NIEHS TIP Program is a Research Scholar Development Award (K22) program targeted to talented postdoctoral scientists. It provides a unique mechanism for attracting and supporting the transition to independent faculty positions by exceptionally talented new investigators who can affect our understanding of the problems and mechanisms associated with exposure to environmental agents to better protect the public health.

The NIEHS TIP Program is designed for exceptionally talented new environmental health scientists in basic, clinical, or population-based (epidemiology) research who have demonstrated outstanding scientific abilities during their training. The objective of the program is to provide a commitment of support for the most promising new investigators early in their career while they establish their independent research program in a research-intensive environment relevant to environmental health sciences. The TIP investigators are expected to design and pursue independent research programs in their areas of interest. The successful applicant will use the award to obtain preliminary data that will, within the first 24 months, be the basis for an investigator-initiated research grant (R01) application or equivalent to the National Institutes of Health (NIH) in

an area of a science directly relevant to the mission of the NIEHS.

The NIEHS has identified priority areas of research that can significantlycontribute to our understanding of the impact of environmental exposure on human health. Research proposals that address one of these areas will receive a priority for funding. The current areas of special emphasis are 1) molecular epidemiology (an emerging scientific area of particular importance to the NIEHS), 2) basic molecular mechanisms of environmental insult, 3) genetic susceptibility and predisposition, 4) human health effects of complex mixtures, 5) reproductive health, 6) neurodegenerative/neurobehavioral diseases or disorders, 7) DNA translational research, 8) impact of environmental exposures on special populations (women, children, and minorities), 9) diet and nutrition, and 10) immune system modulation.

Additional information about these research topics is available on the NIEHS Web site at http://www.niehs.nih.gov/dert/programs/special/special.htm. This request for applications will use the NIH Research Scholar Development Award (K22) mechanism. Applications must be prepared using the PHS 398 research grant application instructions and forms (rev. 5/2001), available at http://grants.nih.gov/grants/funding/phs398/phs398.html in an interactive format.

The deadline for receipt of applications is 10 July 2002. Complete information on this announcement is available online at http://grants.nih.gov/grants/guide/rfa-files/RFA-ES-02-006.html.

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